

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007126**Date Inspected:** 16-Apr-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei / Sun Bo**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Components**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

**ZPMC Mechanical Testing Lab:**

The QA Inspector witnessed mechanical testing for ZPMC Welding Procedure Qualification Test (WPQT) HP2009220 Specimen BBW220 with ABF Representative Craig Knops. Two additional side bends had to be cut, prepared and bent. Both side bends BBW9220-12-1 and BBW9220-12-2 were acceptable. The attached photograph provides additional detail.

**Heavy Equipment Shop Bay 11:**

The QA Inspector attempted to perform a 100% Visual Inspection (VT) of the welds attaching the fit lugs to Lift 1 South Tower 9M, 38M Upper, 43M and 47.6M Diaphragms to Skin Plate A per ZPMC NDT Inspection Notification Sheet 002676. There were several areas that were not ready for inspection. ZPMC Quality Control informed the QA Inspector that he would notify him when the re-work was completed. The attached photograph provides additional detail.

The QA Inspector performed a 100% Visual Inspection (VT) of the welds attaching the fit lugs to Lift 1 South Tower 9M, 38M Upper, 43M and 47.6M Diaphragms to Skin Plate A per ZPMC NDT Inspection Notification

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Sheet 002676. There appeared to be no indications after the re-work and the QA Inspector accepted the above listed welds.

The QA Inspector performed a 15% Magnetic Particle Testing (MT) of the welds attaching 9M, 38M Upper, 43M and 47.6M Diaphragms to Skin Plate A on Lift 1 South Tower. There appeared to be no indications and the QA Inspector accepted the above listed welds.

The QA Inspector performed a 100% Visual Inspection (VT) of the welds attaching 38M, 43M and 47.6M Diaphragm Webs to Skin Plate A on Lift 1 South Tower. There appeared to be no indications and the QA Inspector accepted the above listed welds.

OBG Sub-Assembly Bay 12:

The QA Inspector randomly observed 3 ZPMC helpers utilizing angle grinders to excavate areas in welds marked up after Phased Array Ultrasonic Testing (PAUT) Inspection on the welds attaching the U-Ribs to Deck Plate 8BW-DP147-001 at WJ's 001 through 010.

The QA Inspector randomly observed ZPMC welder Han Si Qi ID 202842, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC WPS WPS-345-FCAW-2G (2F)-Repair in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions to weld U-Rib repairs on Deck Plate 8BW-DP147-001 at WJ's 001 through 010 after PAUT Inspection. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 1 ZPMC helper utilizing an angle grinder to blend areas after PAUT weld repairs, on the welds attaching the U-Ribs to Deck Plate 8BW-DP147-001 at WJ's 001 through 010.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

No relevant conversations.

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150-0042-2372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Franco,Charlie	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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